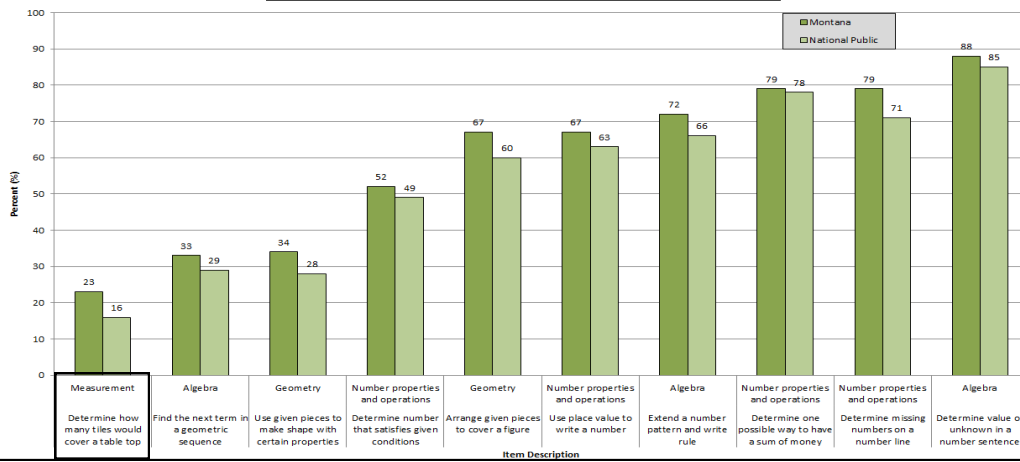


Montana 2009-2011 Grade 4 and 8 Math Results

2009 Grade 8 Mathematics "Correct" Constructed Responses



West Region States:

Alaska, Arizona, California, Colorado, Hawaii, Idaho, **Montana**, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.

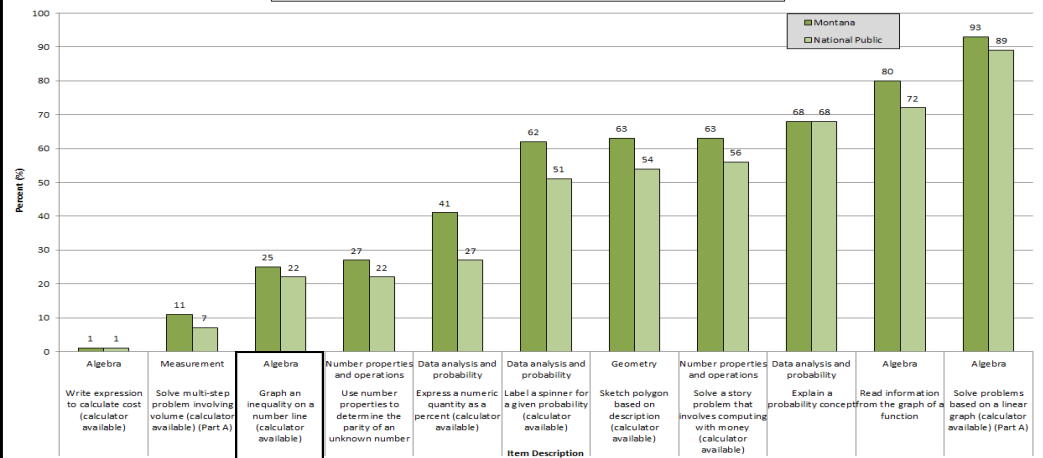
Determine how many tiles would cover a table top:

25% of Washington students, **23%** of Oregon students, **23%** of Montana students, **21%** of Colorado students and **20%** of Idaho students were *likely* to give a "complete" response.

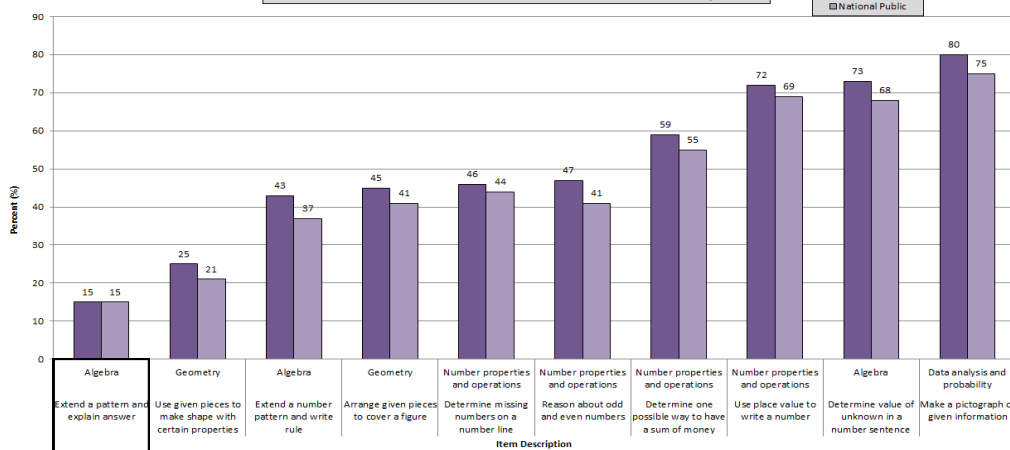
Graph an inequality on a number line (calculator available):

27% of California students, **25%** of Nevada students, **25%** of Alaska student and **25%** of Montana students were *likely* to give a "complete" response.

2011 Grade 8 Mathematics "Correct" Constructed Responses



2009 Grade 4 Mathematics "Correct" Constructed Responses



Extend a pattern and explain answer:

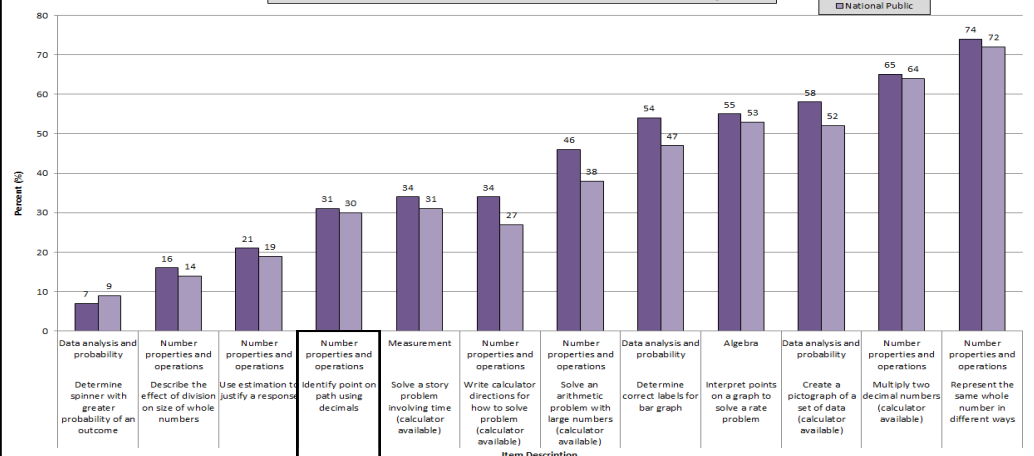
21% of Colorado students, **19%** of Hawaii students, **18%** of Washington students, **18%** of Oregon students and **17%** of Wyoming students were *likely* to give a "complete" response.

Identify point on path using decimals:

36% if Colorado students, **35%** of Washington students, **34%** of Utah students and **33%** of Idaho students were *likely* to give a "complete" response.

Note: Observed differences may not be statistically significant. For items on an item map each question represents the probability that, at any given score point, 65 percent of the students for a constructed-response question answered that question successfully. <http://www.nces.ed.gov>

2011 Grade 4 Mathematics "Correct" Constructed Responses



NAEP Questions Tool

The questions in the NAEP Questions Tool are presented for the use of teachers, parents, students, and others as: (1) examples of what NAEP asks students at grades 4, 8, and 12 for main NAEP, and at ages 9, 13, and 17 for long-term trend; (2) exemplars of questions that probe students' knowledge of a specific content area; and (3) a way to compare an individual's performance on a specific question to that of the students across the nation and in the state. For more information, visit <http://nces.ed.gov/nationsreportcard/itmrlsx/landing.aspx>

NAEP Item Maps

Item maps help to illustrate what students know and can do in NAEP subject areas by positioning descriptions of individual assessment items along the NAEP scale at each grade level. An item is placed at the point on the scale where students are more likely to give successful responses to it. The descriptions used in NAEP item maps focus on the knowledge and skills needed to respond successfully to the assessment item. For more information, visit <http://nces.ed.gov/nationsreportcard/itemmaps/index.asp>

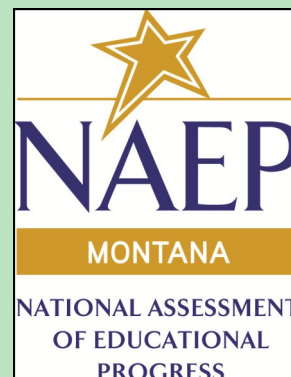
Introducing NAEP to Teachers

Educators explaining the importance of NAEP, the relevance of NAEP and how it applies to teachers. For more information, visit http://www.youtube.com/watch?v=zR1_pUdSIFg&list=PLkEhwZQdyNEEF3ayHdye-kweX7DyF3AwB&index=1

NAEP Webpage: <http://opi.mt.gov/Reports&Data/NAEP.html>

NAEP Wiki: <http://opi.mt.gov/groups/montananaep/>

NAEP items can be used as a helpful educational resource in the classroom. Teachers can use the NAEP Questions Tool to see how students' performance compares on specific items. You can also request any information or specific research data from your NAEP State Coordinator, **Ashley McGrath** at amcgrath@mt.gov.



2011 Grade 8		NAEP Mathematics Scale
Content Classifications:		
◆ Number Properties and Operations	■ Measurement	▲ Geometry ▼ Data Analysis, Statistics, and Probability ◆ Algebra
500		
400		
394	◆	Solve problems based on a linear graph (calculator available)—Extended (CR)
390		
380		
370		
360		
355	▼	Make a prediction using a line of best fit—Correct (CR)
350		
346	◆	Use number properties to determine the parity of an unknown number—Correct (CR)
340		
334	◆	Determine equation of a line given a point and the slope (MC)
333	■	Recognize a unit of volume (MC)
333	▲	Compare similar parallelograms (calculator available) (MC)
333		Advanced
332	◆	Set up and solve an algebraic equation—Correct (CR)
331	◆	Compute the slope and y-intercept given an equation of a line—Correct (CR)
330	◆	Solve a story problem using ratios (MC)
330		
325	■	Solve a problem involving unit conversions (calculator available)—Correct (CR)
320		
317	◆	Use an algebraic model to estimate height (MC)
315	▲	Draw lines of symmetry (calculator available)—Correct (CR)
314	◆	Set up and solve an algebraic equation—Partial (CR)
310		
307	◆	Use number properties to determine the parity of an unknown number—Partial (CR)
306	▲	Determine radius of a circle inscribed in a square (calculator available) (MC)
302	▼	Label a spinner for a given probability (calculator available)—Correct (CR)
301	◆	Compute the slope and y-intercept given an equation of a line—Partial (CR)
300	◆	Solve problems based on a linear graph (calculator available)—Satisfactory (CR)
300		
299		Proficient
294	◆	Choose an equation that describes the relationship in a table (MC)
294	▼	Use the average (mean) to solve a problem (MC)
291	■	Solve a problem involving unit conversions (calculator available)—Partial (CR)
290	▲	Draw lines of symmetry (calculator available)—Partial (CR)
290	◆	Solve a story problem that involves computing with money (calculator available)—Correct (CR)
290		
285	◆	Identify a graph that shows how speed changed (calculator available) (MC)
280	▲	Identify congruent angles in a figure (MC)
280		
272	■	Find the angle with a specified degree measure (MC)
270		
265	◆	Read information from the graph of a function—Correct (CR)
264	◆	Use measuring cups to describe a fraction (calculator available) (MC)
262		Basic
260	▼	Recognize misrepresented data (MC)
260		
258	■	Solve a story problem involving rates (calculator available) (MC)
254	▲	Identify a result of combining two shapes (MC)
251	◆	Solve a story problem that involves computing with money (calculator available)—Partial (CR)
250	◆	Use order of operations (MC)
250		
248	▼	Make a prediction using a line of best fit—Partial (CR)
240		
238	◆	Solve problems based on a linear graph (calculator available)—Partial (CR)
230		
220		
219	◆	Solve problems based on a linear graph (calculator available)—Minimal (CR)
210		
0		
Content Classifications:		
◆ Number Properties and Operations	■ Measurement	▲ Geometry ▼ Data Analysis, Statistics, and Probability ◆ Algebra